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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/582,242	02/27/2007	Remi Pierre Tsiava	Serie 6427	4790
40582	7590	06/22/2009	EXAMINER	
AIR LIQUIDE			PRICE, CARL D	
Intellectual Property			ART UNIT	PAPER NUMBER
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HOUSTON, TX 77056				
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			06/22/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/582,242	TSIAVA ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Carl D. Price	3749	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 06/09/2006 (preliminary amendment).

2a) This action is FINAL.                    2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 12-22 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 12-22 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>06/09/2006</u> .	5) <input type="checkbox"/> Notice of Informal Patent Application
	6) <input type="checkbox"/> Other: _____ .

## DETAILED ACTION

### Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 12-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 12 recites the limitation "the center", in line 8. There is insufficient antecedent basis for this limitation in the claim.

In claim 22, it is unclear what structure would necessarily go to make up a "glass or reheat furnace".

### Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 12 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by **US 6422041 (Simpson et al.)**.

**US 6422041 (Simpson et al)** shows (figure 5) and discloses a method of combustion in a glass furnace including primary jet of oxidizer divided into a first primary central oxidizer jet (42) which is central to fuel jet (40), and a second primary sheathing primary jet (42). **US 6422041 (Simpson et al)** also shows and discloses a second jet of oxidizer (42, 60) located at a distance from the jet of fuel. See the annotated figure 5 of **US 6422041 (Simpson et al)** herein below)

US 6422041 (Simpson et al) shows:

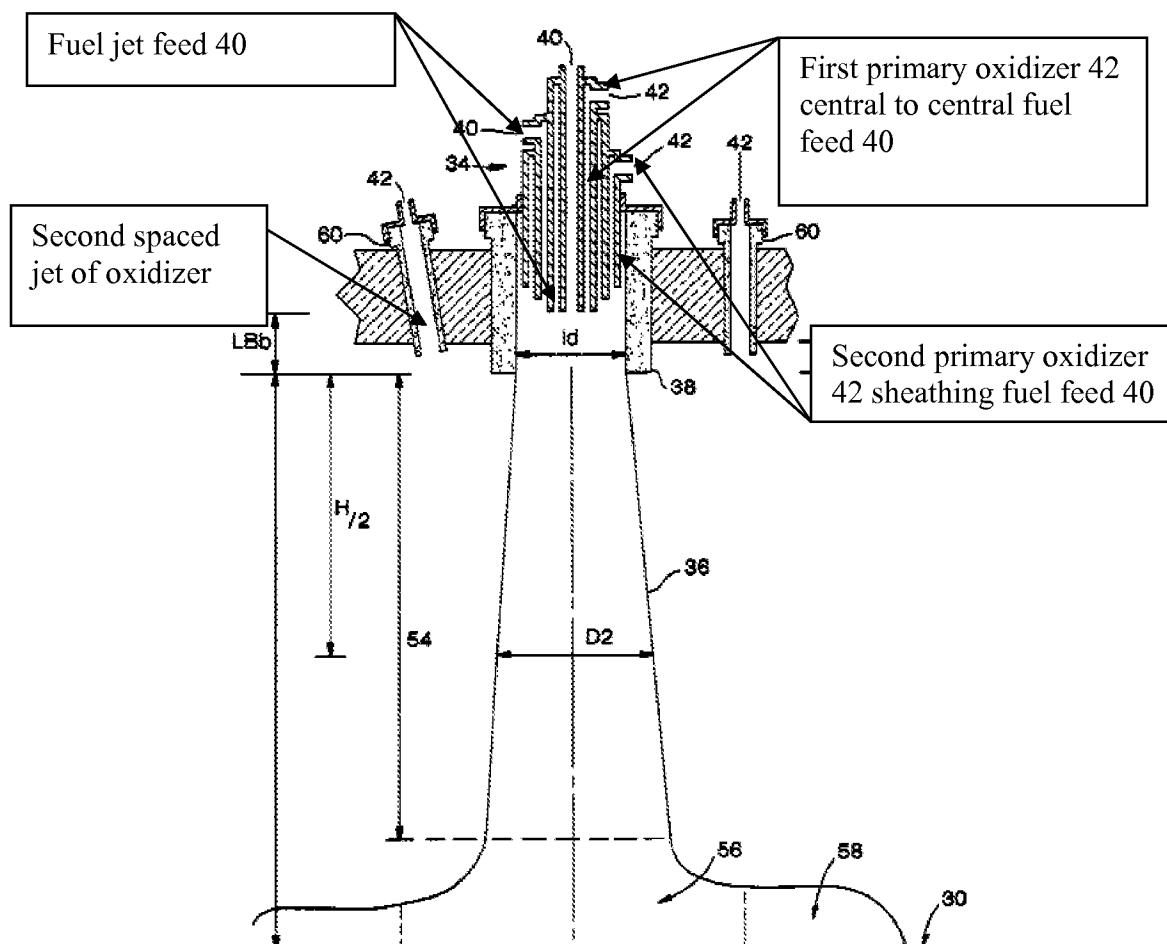


FIG. 5

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

**Claims Rejected under 35 U.S.C. 103(a)**

Claims 13-16, 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over **US 6422041 (Simpson et al)**.

In regard to claims 13-16, 20 and 21, since the velocity of the fuel and oxidant(s), the concentration of the various oxidants, the relative spacing of the for a given burner and/or furnace would necessarily depend on numerous interrelated design concerns such as, the overall size and shape of the burner and/or furnace, the type of fuel combusted, etc., to operate the **US 6422041 (Simpson et al)** burner in the manner claimed can be viewed as nothing more than merely a matter of choice in design absent the showing of any new or unexpected results produced therefrom over the prior art of record. See column 7, line 30-column 8, line 25 of **US 6422041 (Simpson et al)**.

**Claims Rejected under 35 U.S.C. 103(a)**

Claims 1-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over **US 2004/0157178 (Dugue et al)** in view of **US 6422041 (Simpson et al)**.

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention “by another”; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference

under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(l)(1) and § 706.02(l)(2).

**US 2004/0157178 (Dugue et al)** shows (figure 3a) and discloses a method of combustion in a furnace including primary jet of oxidizer (31), a second jet of oxidizer (38) and a tertiary jet of oxidizer (30) located at a distance from the jet of fuel.

**US 2004/0157178 (Dugue et al)** shows and discloses the invention substantially as set forth in the claims with possible exception to:

- primary jet of oxidizer divided into a first primary central oxidizer jet which is central to fuel jet (40), and a second primary sheathing primary jet .

**US 6422041 (Simpson et al)** shows (figure 5) and discloses a method of combustion in a glass furnace including primary jet of oxidizer divided into a first primary central oxidizer jet (42) which is central to fuel jet (40), and a second primary sheathing primary jet (42). **US 6422041 (Simpson et al)** also shows and discloses a second jet of oxidizer (42, 60) located at a distance from the jet of fuel. See the annotated figure 5 of **US 6422041 (Simpson et al)** herein above)

In regard to claims 1-22, for the purpose of providing an alternative desired flame characteristic, it would have been obvious to a person having ordinary skill in the art to modify the **US 2004/0157178 (Dugue et al)** primary oxidant and fuel to be arranged as a primary jet of oxidizer divided into a first primary central oxidizer jet which is central to fuel jet (40), and a second primary sheathing primary jet, in view of the teaching of **US 6422041 (Simpson et al)**. In regard to claims 13- 21, since the velocity of he fuel and oxidant(s), the concentration of the various oxidants, the relative spacing of the for a given burner and/or furnace would necessarily depend on numerous interrelated design concerns such as, the overall size and shape of the

burner and/or furnace, the type of fuel combusted, etc., to operate the **US 2004/0157178 (Dugue et al)** burner in the manner claimed can be viewed as nothing more than merely a matter of choice in design absent the showing of any new or unexpected results produced therefrom over the prior art of record.

**Double Patenting**

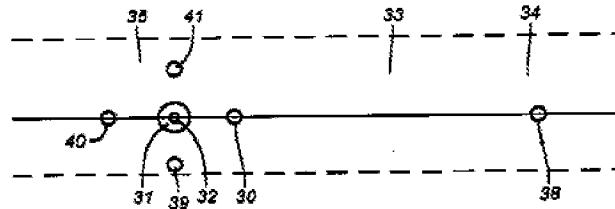
A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

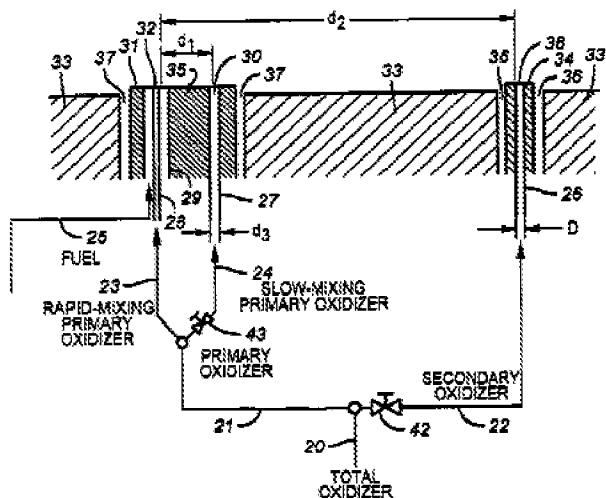
Claims 1-22 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-49 of U.S. Patent No. **US 6910879 (Dugue et al)** in view of **US 6422041 (Simpson et al)**.

**US 6910879 (Dugue et al)** shows (figure 3a) and discloses a method of combustion in a furnace including primary jet of oxidizer (31), a second jet of oxidizer (38) and a tertiary jet of oxidizer (30) located at a distance from the jet of fuel.

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**FIG. 3a**



**FIG. 3b**

**US 6910879 (Dugue et al)** shows and discloses the invention substantially as set forth in the claims with possible exception to:

- primary jet of oxidizer divided into a first primary central oxidizer jet which is central to fuel jet (40), and a second primary sheathing primary jet .

**US 6422041 (Simpson et al)** shows (figure 5) and discloses a method of combustion in a glass furnace including primary jet of oxidizer divided into a first primary central oxidizer jet (42) which is central to fuel jet (40), and a second primary sheathing primary jet (42). **US 6422041 (Simpson et al)** also shows and discloses a second jet of oxidizer (42, 60) located at a

distance from the jet of fuel. See the annotated figure 5 of **US 6422041 (Simpson et al)** herein above)

In regard to claims 1-22, for the purpose of providing an alternative desired flame characteristic, it would have been obvious to a person having ordinary skill in the art to modify the **US 6910879 (Dugue et al)** primary oxidant and fuel to be arranged as a primary jet of oxidizer divided into a first primary central oxidizer jet which is central to fuel jet (40), and a second primary sheathing primary jet, in view of the teaching of **US 6422041 (Simpson et al)**.

In regard to claims 13- 21, since the velocity of he fuel and oxidant(s), the concentration of the various oxidants, the relative spacing of the for a given burner and/or furnace would necessarily depend on numerous interrelated design concerns such as, the overall size and shape of the burner and/or furnace, the type of fuel combusted, etc., to operate the **US 6910879 (Dugue et al)** burner in the manner claimed can be viewed as nothing more than merely a matter of choice in design absent the showing of any new or unexpected results produced therefrom over the prior art of record.

### Conclusion

See the attached USPTO for, 892 for prior art made of record and not relied upon which is considered pertinent to applicant's disclosure.

### USPTO CUSTOMER CONTACT INFORMATION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carl D. Price whose telephone number is (571) 272-4880. The examiner can normally be reached on Monday through Friday between 9:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven B. McAllister can be reached on (571) 272-6785. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Carl D. Price/  
Primary Examiner, Art Unit 3749

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